REMARKS

Applicant thanks Examiner for the detailed review of the application. Claims 1 and 3-20 remain pending.

Claim Rejections -35 USC § 103(a)

The Office Action states:

Claims 1, 3 – 6, 8 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bordaz* et al. (US Patent 6,195,728 B1), and in further view of *Jennings* (US Patent 6,134,631).

In regard to claims 1 and 18 - 20, Bordaz teaches:

"The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness." MPEP § 2142. It is well established that *prima facie* obviousness is only established when three basic criteria are met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (MPEP 2144).

Applicant's amended claim 1 includes, "a shared cache to be shared by the plurality of processor cores, wherein the shared cache includes logic, in response to receiving a write request referencing a block from a requesting processor core of the plurality of processor cores and the block not being owned, to generate a first message including an invalidation part and a write-acknowledgement part."

The Office Action cites Bordaz ability to send messages back and forth, and then relies on th intended use argument to imply that Bordaz is capable of sending a first message in response to

receiving a write-request for a block and the block not being owned, as in applicant's claim 1. With regard to the intended use remarks of The Office Action, it's stated that the intended use must result in a structural difference between the claimed invention and the prior art. As applicant previously submitted in the prior response, claim 1 includes logic within the shared cache to generate the first message in response to receiving a write request and the block not being owned. Therefore, the structure of applicant's claim 1 must be implemented to generate a first message to both invalidate and provide a write-acknowledgement. Although the cited combination discloses a capability of sending and receiving messages, the combination doesn't disclose any structure capable of generating a first message in response to **both a write request and the block not being owned**. In other words, no logic depicted or described in the combination accepts an indication of a write request and a block not being owned. As applicant's claim 1 includes these as conditions— performed in response to....--the conditions would be provided to the logic to generate the first message in some manner.

To further this point, applicant has included the amendment, "including an invalidation part and a write-acknowledgement part." Since neither cited reference discloses a message that is able to invalidate and write-acknowledge, there is also not structure disclosed to generate a message including the two parts. As a result, applicant's logic differs structurally, in that it generates a message with both an invalidation and write-acknowledgment part. Note that a non-limiting embodiment of an invalidation part and write-acknowledgement part is disclosed at least in paragraph 0035 of applicant's description.

With regard to Applicant's claim 18, The Office Action states that tag information is to indicate if the data is valid and if it's held exclusively by a particular processor. However, as applicant claim 18 includes, "each of the plurality of blocks capable of being held in a not present state; a present and owned by a core of the plurality of cores state; a present, not owned, and a core

of the plurality of cores is a custodian state; **and** a present, not owned, and no core of the plurality

of cores is a custodian state." Here, applicant discloses logic that is capable of holding at least all

four included states, which is indicated by the conjunction and in the list. As a result, the structure

of applicant's claim 18 differs in that cache tags, as disclosed, are not able to hold all of these states.

The Office Action states the ability to indicate validity and exclusivity, such as in typical MESI

coherency states. However, the tag structure is not able to indicate custodianship—a cores is a

custodian...no core is a custodian—in conjunction with presence and ownership. Therefore,

applicant's structure differs in at least the capability of holding these states.

The Office Action also states:

Claims 14 and 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bordaz*

(US Patent 6,195,728 B1) in view of *Jennings* (US Patent 6,134,631), and in further view of

Fletcher (US Patent 4,445,174).

Similar to the discussion above of intended use, The Office Action only cites the ability of a

system to send messages back and forth. However, applicant's claim 14 includes, "receiving logic

to receive, from a requesting core of the plurality of cores, a read request referencing the address,

ownership logic to determine an owning processor core of the plurality of processor cores owns a

block associated with the address, and eviction logic coupled to the receiving logic and the

ownership logic, the eviction logic to generate an evict message referencing the address and the

owning processor core in response to the receiving logic receiving the read request the ownership

logic determining the owning processor core owns the block." Applicant's claim 14 includes the

structure of eviction logic coupled to receiving logic and ownership logic. As the combination does

not disclose any eviction based on both a read request and ownership determination or the structure

of eviction logic coupled to receiving logic and ownership logic, applicant respectfully submits that

applicant's structure is sufficiently different from the combination.

Newly added claims 21-32 include method claims. Since there is no intended use issue with the method claims, applicant respectfully submits that they are in condition for allowance, as the cited combinations don't disclose all the elements of at least claim 21, such as generating the single message...invaliding the block...and write-acknowledging.

Conclusion

Therefore, applicant respectfully request that independent claims 1, 14, 18, and 21, as well as their currently pending dependent claims, are now in condition for allowance for at least the reasons stated above. If there are any additional charges, please charge Deposit Account No. 50-0221. If a telephone interview would in any way expedite the prosecution of the present application, such as further discussion of the Intended Use argument section of The Office Action, the Examiner is invited to contact David P. McAbee at (503) 712-4988.

Respectfully submitted,
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